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ABSTRACT OF THE DISCLOSURE

Detection of remote acoustic signals is achieved using a pulse to pulse coherent laser beam which is projected from a telescope to a remote region that contains acoustic signals from a nearby source. Light from the beam is scanned in the region and a resultant signal collected by a telescope. The signal and a reference are applied to an interferometer and the resultant interference pattern applied to a photoreceiver. An alternating current is produced across the photoreceiver which corresponds to the scattered light from the beam caused by the periodic movement of acoustic signals through a region. The detector can be used to determine the curvature of an acoustic signal wavefront and to detect the location of a source producing the acoustic signals. --